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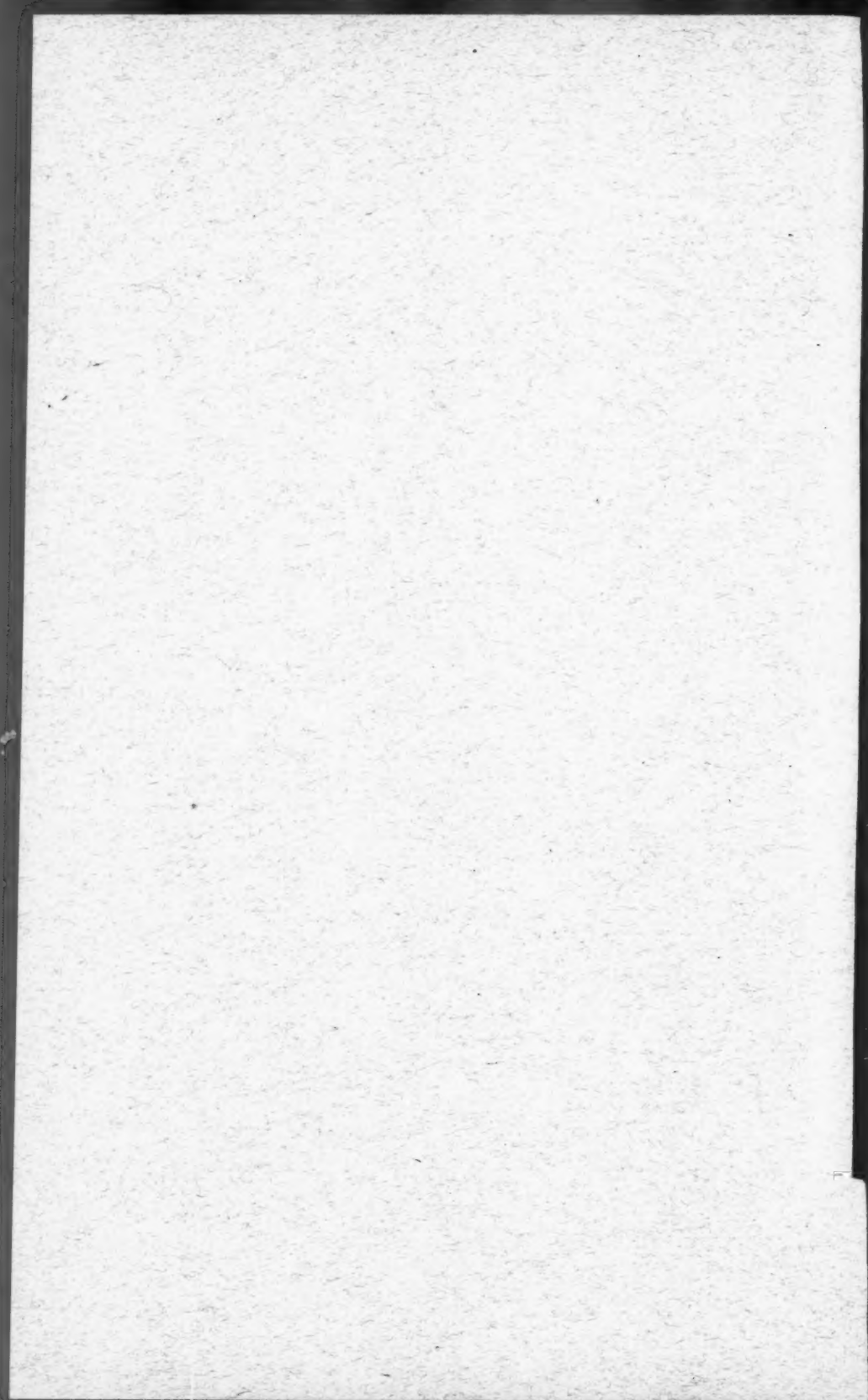
[April, 1920

PROCEEDINGS
OF THE
ROYAL SOCIETY OF MEDICINE

SECTION OF THE HISTORY OF MEDICINE.

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Section of the History of Medicine.

President—Sir D'ARCY POWER, K.B.E., F.R.C.S.

Farquhar Leiche: Medicus Regis.¹

By ARCHIBALD LEITCH.

WHAT Fielding would call "a very thin piece of immaterial substance,"—a couple of old and discoloured charters, some conjectures by antiquaries, a delightful folk-story, and perhaps a headstone in a kirk-yard in the far north,—is all that is left of Farquhar, the Healer, our earliest recorded Scottish physician. But what there is let me recall for the sake of the name in pious memory.

On September 4, 1379, Prince Alexander Stewart, the "Wolf of Badenoch," an enthusiastic reformer of the Church by the radical method of applying the torch to its property, gave a grant of lands lying between the Kyle of Tongue and Loch Eriboll, in Sutherlandshire to one Farquhar, the royal physician. This charter has been lost for the last two hundred years. On the same day, however, King Robert II executed a charter of confirmation, which is still preserved in the Register House at Edinburgh. It measures 13½ in. by 4½ in., is stained and badly creased, and is with difficulty decipherable. It runs as follows:—

Robertus dei gratia rex Scottorum omnibus probis hominibus totius terrae suae salutem. Sciatis nos approbasse ratificasse et hac praesenti carta nostra confirmasse donationem illam et concessionem quas dilectus filius noster Alexander Senescallus miles dominus de Badenach fecit et concessit Farchardo medico nostro de terris de Mellenes et de duabus partibus de le Hope cum pertinentiis: tenendo et habendo dicto Farchardo cum omnibus et singulis

¹ At a meeting of the Section, held November 19, 1919.

libertatibus commoditatibus aysiammentis et justis pertinentiis suis quibuscunque ad praedictas terras cum pertinentiis spectantibus seu quoquomodo juste spectare valentibus in futurum : adeo libre et quiete plenarie integre et honorifice in omnibus et per omnia sicut carta dicti filii nostri eidem medico exinde confecta in se plenius juste continet et proportat : salvo servitio nostro. In cujus rei testimonio praesenti cartae nostrae confirmationis nostrum praecipimus apponi sigillum : testibus venerabilibus in Christo patribus Willmo et Johanne cancellario nostro ecclesiarum Sancti Andreae et Dunkeldensis episcopis : Johanne primogenito nostro de Carric Senescalco Scotiae, Roberto de Fyffe et de Menteth filio nostro dilecto, Willmo de Douglas et de Marr consanguineo nostro, comitibus, Jacobo de Lyndesay nepote nostro carissimo et Alexandro de Lyndesay consanguineo nostro, militibus. Apud Perth quarto die mensis Septembris anno regni nostri nono.

Robert, by the grace of God, king of Scots, to all well-disposed men of his whole realm, greeting. Know ye that we have approved, ratified, and by this our present charter confirmed, that gift and grant which our well-beloved son, Alexander Stewart, Knight, Lord of Badenoch, made and granted to Farquhar, our physician, concerning the lands of Melness and the two parts of Hope with pertinents ; for the said Farquhar to hold and to have with all and sundry liberties, benefits, easements, and lawful pertinents whatsoever now pertaining to the foresaid lands, or which may lawfully pertain thereto in future ; thus freely and quietly, fully, wholly and honourably, in all and by all, as the charter of our said son already executed on behalf of the said physician more fully lawfully contains and sets forth, saving his service to us. In witness whereof we order our seal to be affixed to our present charter of confirmation ; in the presence of, the venerable fathers in Christ, William, and John, our Chancellor, Bishops of St. Andrews and Dunkeld : our first-born, John, Earl of Carrick, Steward of Scotland : our well-beloved son, Robert, Earl of Fyfe and Monteith : our kinsman, William, Earl of Douglas and Marr : our beloved nephew, James, Knight of Lyndsay : and our kinsman, Alexander, Knight of Lyndsay.

At Perth, on the fourth day of September, in the ninth year of our reign.

Seven years later, on the last day of the year 1386, King Robert again honoured his physician by a grant of a number of islands lying off the west coast of Sutherland or sheltered in Loch Eriboll and the Kyle of Tongue. The manuscript, to which the royal seal is still attached, measures 11 by 5½ in., and is in wonderful preservation. The writing is quite legible.

Robertus dei gratia rex Scottorum omnibus probis hominibus totius terrae suae clericis et laycis salutem. Sciatis nos dedisse concessisse et hac praesenti carta nostra confirmasse dilecto et fideli nostro Ferchardo leche pro suo servitio nobis facto et faciendo insulas de Jura Calwa Sanda necnon et Elangawne Elanewillighe Elanerone Elanehoga Elaneqwhochra. Elanegelye

Elanenye fe et omnes insulas nostras jacentes inter Rowestorenastynge et Rowearmedale infra vicecomitatem de Invernys: tenendo et habendo eidem Ferchardo et heredibus suis de nobis et heredibus nostris in feodo et hereditate per suas rectas metas et divisas in omnibus et singulis libertatibus commoditatibus aysiamendis et justis pertinentiis quibuscunque ad easdem insulas pertinentibus seu pertinere valentibus in futurum: libre quiete plenarie integre et honorifice bene et in pace: faciendo nobis et heredibus nostris dictus Ferchardus et heredes sui¹ servitia antiquitus inde debita et consueta. In cujus rei testimonio praesenti cartae nostrae nostrum praecipimus apponi igillum: testibus reverendissimo in Christo patre Waltero dei gratia sediss



Charter with seal attached of Robert II giving a grant of islands off Sutherland to Farquhar Leiche, medicus regis. Dated 31 Dec. 1386. (Photograph by F. C. Inglis, Edinburgh.)

apostolicae cardinali, venerabile in Christo patre Johanne episcopo Dunkeldense cancellario nostro, Johanne primogenito nostro de Carrie Senescallo Scotiae, Roberto de Fyf et de Menteth, Jacobo de Douglas, filiis nostris dilectis, comitibus, Archebaldo de Douglas et Thoma de Erskyne consanguineis nostris, militibus. Apud Edinburgh ultimo die Decembris anno regni nostri sextodecimo.

Robert, by the grace of God, king of Scots, to all well-disposed men of his whole realm, clerk and lay, greeting. Know ye that we have given, granted,

¹ Here, I imagine, the learned scribe's Latin allows itself a long-suppressed yelp.

and by this our present charter confirmed, to our well-beloved and trusty Farquhar Leiche for his service to us, done and to be done, the islands of Jura (now Oldany), Calwa (Calbha), Sanda (Handa), together with Elanegawne (Eilean n'an Coinan, i.e., Rabbit Island), Elanewillighe (probably Eilean a' Bhuilg), Elanerone (Seal Island), Elanehoga, Elaneqwhoehra (Chorrie Island), Elanegelye, Elanenyefe (Eilean na Naobh, Neave, or Saints' Island), and all our islands lying between Point of Stoir in Assynt and Armadale Point, under the Lord-Lieutenancy of Inverness; for the said Farquhar and his heirs to hold and to have from us and our heirs in fee and heritage according to their just and apportioned limits with all and sundry liberties, benefits, easements, and lawful pertinents whatsoever now pertaining to these islands or likely to pertain thereto in future, freely, quietly, fully, wholly, honourably, well and in peace; and to perform for us and our heirs—the said Farquhar and his heirs—the services therefrom due and accustomed of old. In witness whereof we order our seal to be affixed to this our present charter, in the presence of, the very reverend father in Christ, Walter, by the grace of God, Cardinal of the Apostolic See: the venerable father in Christ, John, Bishop of Dunkeld, our Chancellor; our first-born, John, Earl of Carrick, Steward of Scotland; our well-beloved sons, Robert, Earl of Fyfe and Monteith, and James, Earl of Douglas; our kinsmen, Archibald, Knight of Douglas, and Thomas, Knight of Erskyne.

At Edinburgh, on the thirty-first day of December, in the sixteenth year of our reign.

The word here spelt "leche" is the Gaelic word "lighiche" which means the healer or the physician. Judging from the sound of it we might attribute the English word "leech" rather to this Gaelic source than to the Scandinavian origin given by some philologists. At any rate the Scottish patronymics Leitch, MacLeish, and probably Leishman are so derived.

Among the witnesses to the deed there is one in whom I have a friendly interest, namely, John, the son and heir, who assumed the more popular name of Robert on his succession to the throne. His mortal remains repose about a dozen yards from the only part of Scotland that I own, a humble estate of some six feet by three, and in the ordinary course of events, when the last trumpet shall sound, the Primogenitus and I will journey together in the trembling hope of a kindly interview with St. Peter at the gates of Paradise.

Who was this Farquhar? Gaelic authorities differ. In the old statistical account of the parish the minister of Eddrachillis centuries afterwards said that he was a famous physician of Islay, but as the rest of the information given about him with regard to his possessions and how he came by them is so inaccurate we may safely surmise that the

worthy minister was drawing on his imagination. This supposition of the local historian was accepted as a fact by Loch and Campbell and so it has been handed down. That Islay produced a long series of physicians, the MacBeths or Beatons, one of whom certainly was a royal physician, is well known, and this may account for the idea that Farquhar was one of the race. Professor D. Mackinnon and Dr. Cameron Gillies put him amongst the first of the MacBeths. On the other hand, the Rev. Angus Mackay, a historian of no mean merit, asserts that Farquhar Leiche was the son of Iye Mackay, of Strathnaver in Sutherland, and that his descendants, as the Reay documents prove, were known by the name of Mackay. He conjectures that Farquhar was a brother-in-law of the Wolf of Badenoch, and carried away by his enthusiasm he gives him a French training in the healing art and carves a career for him as an ophthalmologist on the ground that Froissart stated that Robert II suffered from a chronic inflammation of the eyes.

Part of the possessions of Farquhar passed to the chief branch of the family on September 30, 1511, when Donald McDonachy, of Melness, "descendit fra Farquhar Leiche" as later writing on the back of the charter says, resigned the lands of Melness, Mussel, and Hope, to Iye Mackay of Strathnaver. More than a century later, on October 6, 1624, William McAllan, who was a Mackay, sold the remaining part of the estate, the islands, to Sir Donald Mackay of Strathnaver. And so Farquhar and his traceable descendants vanished. Surely no one but a native of the north of Sutherland, standing high as Farquhar did in the royal favour, would be likely to get or to ask for a host of minute islands of little value apart from sentimental reasons. There he would be king of his own undisputed kingdom, there he could indulge the fancies of romantic solitude *παρὰ θίνα πολυφλοίσβοιο θαλάσσης*, and when he was tired of one island he could shift to the next.

And now let us borrow from Campbell's "Tales of the West Highlands," a traditional Sutherlandshire story of our doctor.

"Now Farquhar was at one time a drover in the Reay country and he went from Glen Gollich to England to sell cattle: and the staff that he had in his hand was hazel. One day a doctor met him.

'What's that,' said he, 'that ye have got in your hand?'

'It is a staff of hazel.'

'And where did ye cut that?'

'In Glen Gollich, north in Lord Reay's country.'

'Do ye mind the place and the tree?'

'That do I.'

'Could ye get the tree?'

'Easy.'

'Well, I will give ye gold more than ye can lift, if ye will go back there and bring me a wand off that hazel tree; and take this bottle and bring me something more, and I will give you as much gold again. Watch at the hole at the foot, and put the bottle to it: let the six serpents go that come out first, and put the seventh one into the bottle, and tell no man, but come back straight with it here.'

So Farquhar went back to the hazel glen, and when he had cut some boughs off the tree he looked about for the hole that the doctor had spoken of. And what should come out but six serpents, brown and barred like adders. These he let go, and clapped the bottle to the hole's mouth, to see would any more come out. By and by a white snake came rolling through. Farquhar had him in the bottle in a minute, tied him down, and hurried back to England with him. The doctor gave him siller enough to buy the Reay country, but asked him to stay and help him with the white snake. They lit a fire with the hazel sticks, and put the snake into a pot to boil. The doctor bid Farquhar watch it, and not let anyone touch it, and not to let the steam escape 'for fear,' he said, 'folk might know what we were at.' He wrapped up paper round the pot lid, but he had not made all straight when the water began to boil, and the steam began to come out at one place. Well Farquhar saw this, and he thought he would push the paper down round the thing; so he put his finger to the bit, and then his finger into his mouth, for it was wet with the bree. Lo! he knew everything, and the eyes of his mind were opened. 'I will keep it quiet though,' said he to himself.

Presently the doctor came back, and took the pot from the fire. He lifted the lid, and dipping his finger into the steam drops he sucked it; but the virtue had gone out of it, and it was no more than water to him. 'Who has done this?' he cried, and he saw in Farquhar's face that it was he. 'Since you have taken the bree of it, take the flesh too,' he said in a rage, and threw the pot at him.

Now Farquhar had become all wise and he set up as a doctor, and there was no secret hid from him, and nothing that he could not cure. He went from place to place and healed men, and they called him Farquhar Leigheach (the healer).

Now he heard that the king was sick, and he went to the city of the king to know what would ail him. 'It was his knee,' said all the folk, 'and he has many doctors, and pays them all greatly; and whiles they can give him relief, but not for long, and then it is worse than ever with him, and you may hear him roar and cry with the pain that is in his knee, in the bones of it.' One day Farquhar walked up and down before the king's house, and he cried 'An daol dubh ris a chnamh gheal!' (the black beetle to the white bone). And the people looked at him, and said that the strange man from the Reay country was throughother.

The next day Farquhar stood at the gate and cried, 'The black beetle to the white bone!' and the king sent to know who it was that cried outside and what was his business. The man, they said, was a stranger, and men called him the Physician. So the king, who was wild with pain, called him in; and Farquhar stood before the king, and aye 'The black beetle to the white bone,' said he. And so it proved. The doctors to keep the king ill and get their money put at whiles a black beetle into the wound in the knee, and the beast was eating the bone and his flesh, and made him cry day and night. Then the doctors took it out again for fear he should die; and when he was better they put it back again. This Farquhar knew by the serpent's wisdom that he had when he laid his finger under his teeth. And the king was cured and had all his doctors hung.

Then the king said he would give Farquhar lands or gold or whatever he asked. Then Farquhar asked to have the king's daughter, and all the isles the sea runs round from Point of Storr to Stromness in the Orkneys. So the king gave him a grant of all the isles. But Farquhar the physician never came to be Farquhar the king, for he had an ill-wisher that poisoned him and he died."

In the churchyard of Farr there still stands an old stone, sculptured with Celtic cross and tracery, known as the Clach Erchar, or stone of Farquhar. It is supposed to mark the place when the Healer sleeps by the shores of the northern seas.

Whether Farquhar Leiche was a MacBeth of Islay or a Mackay of Sutherland will never be settled as long as there are two different clansmen left to dispute. Let no one say that it does not matter much. The MacBeths have enough and to spare of famous physicians, and they can afford to give Farquhar to the Mackays. As a descendant of the latter clan I am terribly prejudiced; the charters and the local tale are sufficient evidence to me that he was a native of the Reay country of Sutherland, and though he gained his fame and fortune far from the place of his boyhood, yet like all Scots, wherever or however they may be, he carried in his heart the magnetic memory of the silent lochs, the fine green glens, and the grand eternal hills of home.

Section of the History of Medicine.

President—Sir D'ARCY POWER, K.B.E., F.R.C.S.

The History of Baths and Bathing in Britain before the Norman Conquest.¹

By C. F. SONNTAG, M.D.

THE early history of baths and bathing in Britain is a fascinating study, but one must go to the old chronicles, the transactions of antiquarian societies, and the *Proceedings* of our own Sections of Balneology and History of Medicine for details. The modern British and American text-books of medical hydrology are practically silent about it, for their historical epitomes begin with the writings of Sir John Floyer [13] in the year 1697. Indeed, the only British work which gives any details of value is Dr. Neville Wood's "Health Resorts of the British Isles."

In the present paper I have brought together the results of my own researches in the fields mentioned above, and I have drawn up a historical schema in accordance with them. I must, however, point out that each investigator will, probably, elaborate a schema of his own, based on the books and papers to which he has access, and on any excavations he may make, if he is an archæologist.

The schema, given below, consists of two tables set down side by side. The first one is a division of medical history in general, and the second one illustrates the contemporary events in the history of medical hydrology in Great Britain. It also shows the dates at which the early writers, to whose works I am indebted for information, lived and wrote.

A glance at the table headed "Medical History" shows that there

¹ At a meeting of the Section of Balneology and Climatology, held December 4, 1919.

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are a number of periods which can be arranged in three groups—those preceding the Dark Ages, the Dark Ages, and those subsequent to them.

British hydrological history is divisible into two ages—empiric and scientific—each of which can be subdivided into a number of periods. The point of separation between them is the appearance of Sir John Floyer's "Pseuchrolusia" in the year 1702. The empiric age can again be divided into three periods in the same way as medical history in general, and the pre-mediaeval age consists of British, Roman and Saxon eras. In the Roman era lived the chroniclers Ausonius, who wrote about the sacred fountains of the Britons, Dion Cassius, who described the use of peat baths by the Picts and Scots, and Solinus Polyhistor, who wrote the first account of Bath. In the Saxon age, we have the chroniclers Gildas and Nennius, the hero King Alfred the Great, who received prescriptions for baths from the patriarch of Jerusalem, and, the physician Bald, for whom the Leech Book was written.

HISTORICAL SCHEMA.

Medical History.

- I. The Age of Foundation
(ends 1184 B.C.).
- II. The Mystic Period
(1184-460 B.C.).
- III. The Classic Greek Period
(460-146 B.C.).
- IV. The Græco-Roman Period
(146 B.C. to A.D. 476).
- V. The Byzantine Period
(476-732).
- VI. The Arabic Period
(732-1096).
- VII. The Mediaeval Period
(1096-1438).
- VIII. The Renaissance (1438-1600).
- IX. The Seventeenth Century.

British Hydrological History.

- (A) The Empiric Age.
Stonehenge.
The Legend of Bladud.
(? 863 B.C.).
The Roman Period
(A.D. 50-410).
Ausonius (A.D. 380).
Dion Cassius (A.D. 150).
Solinus (A.D. 80).
The Saxon Period
(A.D. 410-1066).
Ravenna (A.D. 450).
Gildas (A.D. 500).
Nennius (A.D. 500).
Alfred the Great.
Leech-book for Bald.
John of Gaddesden.
The Bathes of Bathes Ayde.
Sir John Floyer.
- (B) The Scientific Age.
Currie.
Wright.
Jackson.
Wesley.
Hancock.
Smith.
The Hydropaths.
Modern Methods.

The pagan Britons, according to Gildas, paid divine worship to mountains, rivers, springs and groves and Conybeare [8] describes the various gods and goddesses who ruled natural phenomena and healing. Sul, for example, was the goddess who presided over the hot springs at Bath. When the Britons became Christians they still maintained their reverence for water. Camden [5] relates how, when they were drawn up in battle array against the Saxons, in Cheshire, they drank of the water of the river Dee in memory of the holy blood of Christ. Moreover, many of the olden gods of the springs became saints who ruled the wells.

One can see, therefore that water was part of the religious beliefs of the Britons, both Pagan and Christian, and Sir John Floyer [13] showed how there is a connexion between the primitive beliefs and many of the religious observances of the modern church. Like their relatives the Gauls, the Britons had sacred fountains, or "Divona," the word signifying the fountains of the gods. Ausonius, in his description of a mineral spring at Bordeaux, wrote :—

"Divona Celtarum lingua fons addite Divis."

In the modern Welsh language similar words exist. Dyw = God ; Ffynnon, or vonan = a fountain ; Dwr = water.

The religious ceremonies were supervised by the Druids, and it is believed that water played a part in them, being applied in the form of affusions. Camden described the remains of the apparatus at Carn Brea Hill, as it existed in his day (1587).

"The top of the hill was thick set with karns or groupes of rocks, and the spaces between and below were, in the last generation, filled with oak trees. On a karn at the west end are artificial basons of an irregular figure to hold lustral water, cut in the uppermost rock ; five of them have distinct lips or mouths, to discharge whatever is poured in. A curious orbicular flat stone thrown down from the top had a very large bason."

Several wells were sacred to the Britons, and I would only mention those of Bath, in Somerset, Madron Well and Euny's Well in Cornwall, King Arthur's Well at Camalet and Ashwell in Derbyshire. The last of these was called "Magioninium" by the Britons. At a later date the Romans and Saxons made use of many of the springs.

One cannot study the history of British hydrology without coming across the name of King Bladud, who was also called Bleyden Cloyth, or Bleyden the Magician. He is supposed to have lived about the year 863 B.C., which is eighty-seven years after the death of Homer, and

one hundred and eight years before the founding of Rome. His sword was found at Swainwick, and Wood thought that certain ruins, discovered at Harptre in Somerset, were the remains of a bardic college founded by him. Geoffrey of Monmouth, Pearcey, and the poet, John Milton, stated that he discovered the warm springs of Bath, but Camden and others are sceptical. Whether Bladud was a mythical person or not, the legend, taken in conjunction with tangible remains, illustrates how water was used by the early Britons. We have in that story, the remains of Druidical ceremonies and philosophy, and the names of springs used by the early Britons, the British hydrological counterpart of the Mystic and Greek periods of medical history. It was, in short, mystical, for we know nothing of therapeutics. When the Romans settled down the Britons adopted their hydrotherapeutic customs.

THE ROMAN PERIOD (A.D. 50-410).

A survey of Roman hydrology reveals a mixture of mysticism and true science which was far in advance of some of the so-called science even of the present day. The ruins of their baths and the inscribed altars, which I have found to exist in at least sixty places in Britain, show that their customs were very excellent. The ruins, &c., can be arranged in seven groups:—

- (1) Private hygiene: Woodchester, Leyton, Stunsfield.
- (2) Public hygiene: Bath, Lincoln, Chester, Cirencester.
- (3) The cult of Asklepios and the Rudge Cup.
- (4) Mineral springs and votive offerings.
- (5) Therapeutics.
- (6) Monuments commemorating the erection and repair of baths.
- (7) Sepulchral inscriptions.

It was not until the beneficent administration of Julius Agricola took place in the year A.D. 83 that the splendid temples, baths, &c., began to rise all over the country, for the severe fighting which had previously taken place prevented it. Conybeare says that "it is appropriate that the only inscription relating to Agricola as yet found in Britain should be on two of the lead water pipes (discovered in 1899 and 1902) which supplied his new Roman city (*Deva*) at Chester.

The Roman bathing establishments, or "Thermae," consisted of a number of apartments. (1) The *Apodyterium*. Here the bathers

removed their clothes, which were then handed to slaves, called *capsarii*. These men were notorious for dishonesty, and were leagued with all the thieves of the city, so that they connived at robberies which they were placed to prevent. The apodyterium had an *Elaeothesium*, or anointing room, connected with it. (2) The *Frigidarium*, or *Cella Frigidaria*, where the cold bath was taken. The cold bath itself was known as *Natatio*, *Natatorium*, *Piscina*, *Baptisterium* or *Puteus*. (3) The *Tepidarium*, which was a room heated with warm air to an agreeable temperature, in order to prepare the body for the great heat of the vapour and warm baths, and upon returning from the latter, to obviate the danger of a too sudden transition to the open air. (4) The *Calidarium*, or *Concamerata Sudatio*, contained at one extremity the vapour bath (*Laconicum*), and at the other the warm bath (*Balneum* or *Calda Lavatio*), while the centre space between the two ends was termed

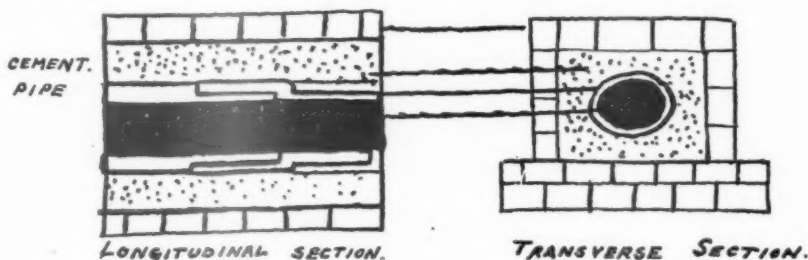


FIG. 1.

Longitudinal and transverse sections of water pipes discovered at Lincoln.

"*Sudatio*," or *Sudatorium*. In large establishments the vapour baths and warm baths were in two separate cells, and then the former part was the *Sudatorium*. (5) The heating apparatus, or "*Hypocaustum*," which consisted of a furnace and flues. The floor of the sudatorium, termed the "*Suspensura*," constituted the roof of the hypocaustum.

Water was brought to the baths through pipes or aqueducts, and many of the pipes had inscriptions on them. I have already alluded to inscriptions on pipes supplying the baths at Chester. The pipes might be soldered or hammered together, or they might be socketed together and embedded in cement. Pipes of the latter class were discovered at Lincoln (fig. 1). The pipes sloped downwards, so that the baths were filled by gravity.

The heating apparatus, discovered at Lincoln in the year 1739, was

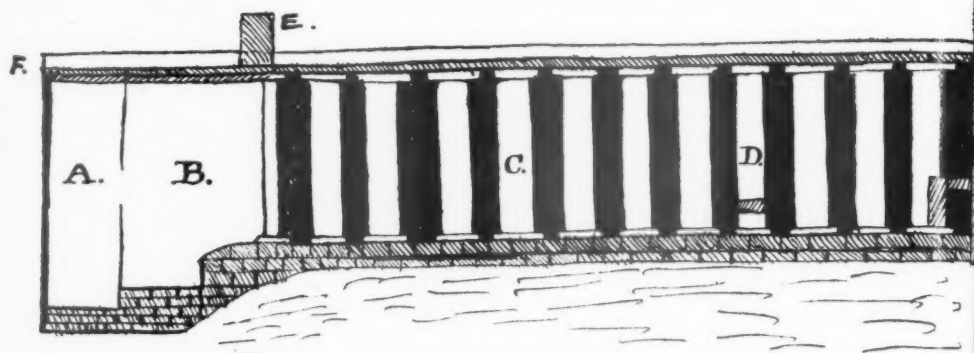


FIG. 2A.

Elevation of a Roman hypocaust, discovered in 1739 at Lincoln. A, præfurnium; B, fornax; C, D, alveus; E, chimney; F, suspensura.

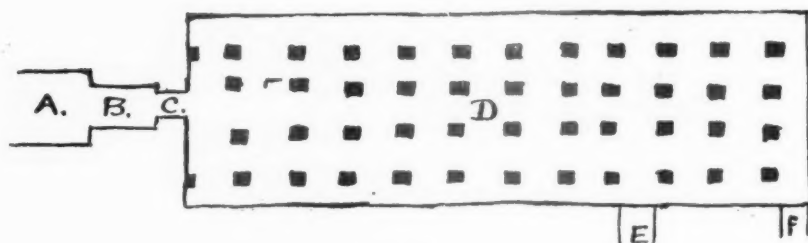


FIG. 2B.

Plan of a Roman hypocaust, discovered in 1739 at Lincoln. A, præfurnium; B, fornax; C, D, alveus; E, F, chimneys.



FIG. 2C.

The hypocaust at Bath. Shows the remaining parts of the hypocaust pillars.

very perfect and complete (fig. 2a). There was first an entrance chamber, or *præfurnium*, where, I presume, the stokers worked. An opening led into the furnace or *fornax*. The smoke left by a chimney, but some smoke and the hot air passed into the *alveus* or body of the flue, which was a square chamber. Its floor was made of bricks united by *terras mortar* which was a strong cement composed of lime, ashes and brick dust. So strong was it that it was harder to break than stones joined by its use. On this floor were erected a number of pillars supporting a pavement of two layers termed a *suspensura*, constituting part of the *laconicum*. The lower layer was composed of a brick course, and the upper one of *terras cement* and mosaics or *tesserae*.

Hypocausts found in different parts of the country differ only in small details from the one described above. Sometimes the *fornax* was not connected to the other parts by building because it required renewal at intervals on account of the destructive effects of the flames. Again the floor might be made of cement or brick and the pillars round, square, or of both kinds, or they might be clamped and strengthened by iron bands. Lastly the *alveus* might be square or round as in examples excavated at Bath. Of all the Roman relics in Britain, the greater number consists of hypocausts.

Heat from the furnace was distributed over the building by flues, and box-tiles were used for the purpose. In the British Museum there are several examples of single and double box-tiles found in London and elsewhere. In fig. 5B a heap of box-tiles can be seen. These were sometimes inscribed (fig. 3), or they might be scored so that cement would obtain a firmer hold on them. They were arranged in the walls under the floors of vapour rooms and *tepidaria*. Also they were employed in heating the rooms in dwelling-houses. This is probably the pioneer method of central heating.

A. R. V. I.

FIG. 3.

Inscription on box tiles discovered at Chedworth.

Camden has given a most minute description of the wonderful ruins of the prætorian villa of Woodchester, and the following extract shows how the box-tiles and flues, in connexion with the *laconicum*, were arranged :—

"The flue was of hard cement and was situated 4 ft. below the surface of the ground. It measured 9ft. 10 in. by 8 ft. 10 in. and it was 8 in. thick.

Beneath the floor was a layer of bricks each of which was 2 ft. long, 1 ft. wide and 2 in. thick. These covered the flues which were 2 ft. 2 in. deep. Of these flues four were transverse and one was longitudinal. The space between the transverse flues was filled with ridge tiles forming funnels and placed between layers of brick and stone. The funnels were 18 in. long and $4\frac{1}{2}$ in. in diameter. There were rows of perpendicular funnels extending along the north and south walls and the tops were level with the surface of the cement floors."

All the thermæ had at least a sudatory and a cold bath, but in others there were warm baths as well. The former was all that hygiene

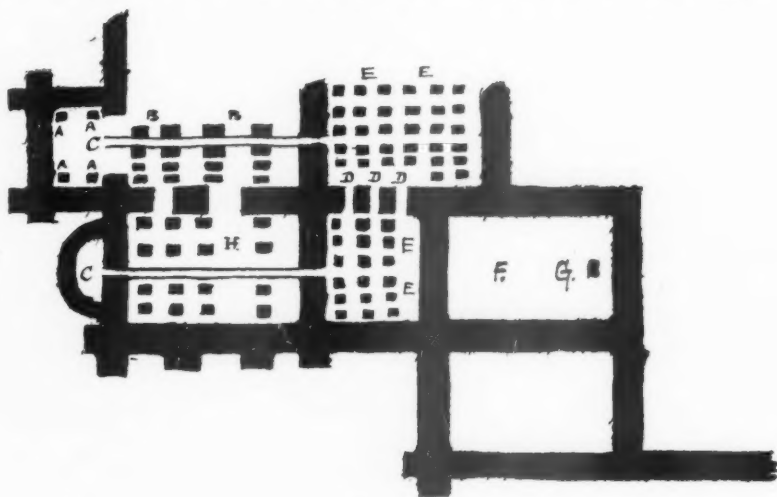


FIG. 4.

Plan of Roman baths at Netherby. A, room; B, room; C, air conduit pipes; D, pipes through wall; E, pillars of hypocaust; F, cold bath; G, altar; H, room.

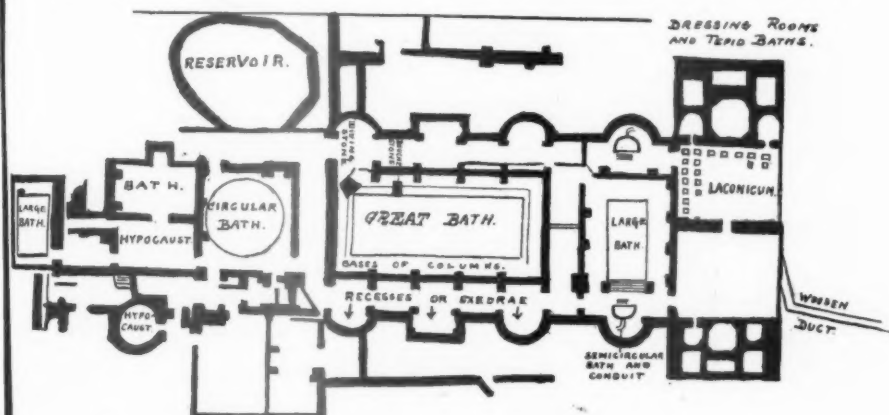
demanded, but the latter catered for those who liked luxury, or required balneary treatment. Both kinds have been discovered in Britain. The contrast between the elaborate and magnificent thermæ at Bath, and the simplicity of those at Netherby is great (fig. 4). Possibly the function of the latter was simply to maintain the health of the legionaries who defended Hadrian's wall. The only adornment was an inscribed altar standing in the cold bath.

The functions of many of the baths are known, but the true use of the circular bath, at Bath, is not yet, and possibly never will be, known. It may have been a plunge bath or a bath for treating special diseases

similar to our present-day sedative pool bath (fig. 5c). Many of the baths were lined by sheet lead.

The Romans employed douches after their baths, and remains of the apparatus have been found. At Bath the great bath (fig. 5A) has a platform and a perforated stone which are supposed to have been part of a douche apparatus. Moreover, pipes which conveyed cold water to the baths have been discovered, and the absence of the orange deposit, which forms in pipes conducting the hot mineral water, favours this view.

The order in which the different apartments of the thermæ were used varied. The common procedure was to sweat gently, while still clothed, in the tepidarium. Then the bather undressed in the



GROUND PLAN OF THERMAE AT BATH.

FIG. 5A.

apodyterium and was anointed. Proceeding next to the calidarium he sweated well, and then he went into the cold bath, or had affusions of decreasing temperature applied. Finally, he was scraped with the strigil and anointed.

Although some of the thermæ in Britain were richly adorned with pilasters, friezes, cornices, colonnades and tessellated pavements, they did not attain to the extreme degree of luxury of the baths of Caracalla and Diocletian at Rome. Recesses, or exedrae, do exist at Bath (fig. 5A), but we do not know whether poets, philosophers or rhetoricians entertained the bathers reclining therein. It is probable that they did not, for Bath was a small settlement populated only by invalids and

those connected with the thermæ. The thermæ were not so richly adorned as the prætorian villas. Camden gives the following description of the magnificent villa at Woodchester:—



FIG. 5B.

The thermæ at Bath. Note the douche stone and box tiles in the foreground.

“Two great courts ran the whole length of the building and had several rooms opening out of them. The first, or greater court, was the Peristylum of Vitruvius and was surrounded by a colonnade, of which fragments of columns remained. There were ranges of buildings on its east and west sides.

On the east side were the *Laconicum* and the *Apodyterium*; on the west side were the cold bath and the rooms for servants. These had no pavements nor decorations. On the north side were three rooms with statues, marbles, &c. These were *Oeci* or *Exedrae*.

"The inner court had galleries on the north, east and west. Those on the north and east had tessellated pavements. The galleries constituted the *Crypto-porticus* surrounding an area called the *Atrium*. The room with the great pavement was the *Caevadium Tetrastylon* of Vitruvius, and it was very magnificent. The walls on the west side of the *Caevadium* and *Crypto-porticus* are probably the remains of the *Triclinia Hyberna* and baths, as most of them



FIG. 5c.

The circular bath at Bath.

have subterranean flues, and their situation corresponds to that assigned for them by Vitruvius. The hypocaust warmed the rooms on the west side of the *Crypto-porticus*.

"There were, on the great pavement, five octagonal compartments containing figures on a white ground surrounded by a double labyrinth fret; immediately within which, on the north side, is a scroll of flowers with a vase in the centre. In the north-west and south-east corner apartments are fragments of Bacchanalian figures: the south-west corner compartment has figures of two boys holding up a basket of fruit and leaves with the inscription

BONVM EVENTVM. In the north-east corner compartment were letters BIINII C and the whole inscription was BONVM EVENTVM BENE COLITE. II is the Greek H introduced for E. Flues and the remains of a fireplace were also discovered.

"The waste water was drained away through culverts, some of which were so capacious that a man could stand upright. In some culverts priceless Roman relics have been discovered."

THE CULT OF ASKLEPIOS.

The Cult of Asklepios, which can be regarded as the forerunner of our modern spa treatment, was introduced into Rome in the year 291 B.C. It became very popular and was practised in the remote outposts of the empire. There is evidence, from inscribed altars, that Æsculapius was worshipped in Britain, and I would suggest that the Rudge Cup is a relic of the Asklepieian Cult. Inscriptions dedicated to him have been found at Binchester, Lanchester, Ellenborough, Chester and Greenwich, and Wynter thought that the inscription to Hercules Ophinchus, which was discovered at Bath, referred to Æsculapius. Figs. 6A and 7 are reproductions of three of these inscriptions.

ΑΣΚΛΗΠΙΩ	To Asklepios
Α·ΕΓΝΑΤΙΟΣ	Aulos Egnatios
ΠΑΣΤΟΡ·ΕΘΗΚΕΝ	Pastor set this up.

FIG. 6.

Figure inscription on altar to Æsculapius discovered at Ellenborough in Cumberland.

· · CTI	[AES]CVLAPIO
· · · ΦΛΑΟΡ	[ET]SALVTI
· · ITIANO	[PRO SALV]TE ALAE VET
· · · ΛΙΑΡ	[TONVM] C.R.M. AVRE
PIO	[L.CRYS]OCOMAS. ME
T.FL.TITIANVS	[V.S.]L.M.
TRIB.	
V.S.L.L.M	

FIG. 7.

Inscription on an altar dedicated to Æsculapius and Salus by M. Aurelius Habrocomas, the physician. Discovered at Binchester.

[FIG. 6A.

Inscription on an altar to Æsculapius, discovered at Lanchester.

The Asklepieia, or pagan temples, were situated among pleasant and hygienic surroundings. Patients came to them from far and near. After listening to recitals of the deeds of Æsculapius, and witnessing sacrifices, the patients were submitted to treatment which included baths, massage, diet, exercises, &c. Everything was done to produce the state of *mens sana in corpore sano*, and the better the modern spa, the more does it approximate to an Asklepieian temple. I believe that the Rudge Cup, which was discovered on the Icknield Street in Wiltshire, is a relic of the Cult of Asklepios. It was a brass vessel richly adorned with foliage and measuring $2\frac{1}{2}$ in. in diameter. Round the upper part was engraved the inscription:—

A MAIS ABALLAVA VXELODVM CAMBOGLANS BANNA

The interpretation depends on the place each of the words represents, for they are all names of towns, camps or settlements near Hadrian's Wall. Gale thought it was a patera used in libations by the people of the five neighbouring stations mentioned on it, perhaps on some alliance against the northern invaders. On the other hand Bruce, the modern historian of the Roman wall, thinks it represents an itinerary of the journey of a patient from Moresby to Gilsland Spa. He believes that A = from; Mais or Maia = Moresby; Aballava = Papcastle; Uxelodum = Ellenborough, near Maryport; Camboglans or Amboglanna = Burdoswald; Banna = Gilsland Spa. At Gilsland offerings would be made to the presiding deity, possibly Æsculapius. At Amboglanna a vase was found celebrating a cure by mineral waters, and in the old Asklepieia the cures were recorded on tablets. Moreover, Gilsland is a suitable place for an Asklepieion.

THE USE OF MINERAL SPRINGS: LOCAL DEITIES.

The Romans made the fullest use of medicinal springs, especially the hot ones, and they employed several wells which the Britons had worshipped. Gods and goddesses presided over them and over rivers. Minerva ruled the hot springs of Bath; Verbeia presided over the river Wharfe; Neinbrica was the goddess of the river Lune; Coventina was the deity presiding over the spring at Procolitia (Carrawborough), near Hadrian's Wall. Figs. 8 and 9 are reproductions of inscriptions to Verbeia and Neinbrica.

VERBEIAE
SACRVM
CLODIVS
FRONTO
PRAEF. COH
II. LINGON.

DEAE NYMPHELA
NEINBRICA X ET
IANVARIA : FIL
LIBENTES EXV^o
TO SOLVERVNT

FIG. 8.

Inscription to Verbeia discovered
at Ilkley.

FIG. 9.

Inscription to Neinbrica discovered
at Greta Bridge.

Patients threw votive offerings into the water, and these took many forms. Coins, jewels, images, models and inscribed plates were all employed. They were intended to implore divine aid in disease, or to return thanks for treatment. Sometimes, on the other hand, they were to ask for the curses of the deity upon some enemy; an inscription of this kind was discovered at Bath. The largest collection of votive offerings, found in Britain, was discovered at Procolitia.

INSCRIPTIONS CELEBRATING THE REPAIR OF BATHS AND TEMPLES OF THE GODS RULING THE SPRINGS.

During the Roman occupation the baths sometimes became ruinous. When one was repaired the occasion was thought to be a fitting one for a commemorative inscription on stone. They also celebrated the restoration of baths built before their time in the same manner. Figs. 10 and 11 are reproductions of inscriptions celebrating the repair of baths. The former was discovered at Bowes, in Yorkshire, and the latter at Luxeuil, in France. Similar inscriptions were cut when the temples of

DEAE FORTVNAE
VIRIVS LVPVS
LEG. AVG. PR. PR
BALINEVM EXVST
IGNIS EXVST
VM. COH. I. THR
ACVM REST
ITVIT CVRANTE
VAL. FRON
TONE PRAEF
EQ ALAE VETTO

LIXOVII THERM
REPAR LABIENVS
IVSS. C. IVL. CAES

FIG. 10.

Inscription on an altar found at
Bowes in Yorkshire.

FIG. 11.

Inscription discovered at Luxeuil,
in France.

..... CE PROACI
DEAE SVISM

..... NDVS LIGVR
VE NIMIA VETVS

FIG. 12.

Inscription on the pediment of the Temple of Minerva at Bath.

the deities, who presided over the springs, were restored. Fig. 12 is the reproduction of an inscription on the pediment of the Temple of Minerva, at Bath. It is supposed to denote reparative work. Governor Pownall gave the following as the complete inscription:—

“Aulus Claudius Ligurius sodalis ascitus fabrorum collegio longa seria defossa hanc aedem e nimia vetustate labentem inventa illic pecunia refici et repingi curavit.”

THERAPEUTICS.

We know that the Romans had physicians, we know of some of the patients who visited the *thermae* we possess relics and inscriptions celebrating cures, and we have sepulchral inscriptions of those who died at the spas. We do not, however, know anything about the actual therapeutic measures employed, and we are ignorant of the diseases for which baths and drinking were prescribed. It is believed, however, that drinking the waters was not a popular form of treatment. The evidence that the Romans had doctors is contained in inscriptions found at Housesteads (*Borcovicus*), Chester and Binchester. Figs. 13 and 14 are reproductions of the inscriptions discovered at the first two of these places. Fig. 7 is the reproduction of an inscription on an altar discovered at Binchester. It was erected by the physician Marcus Aurelius

D.M.
ANICIO
INGENVO
MEDICO
ORD COH
I TVNGR
VIX. ANN. XXV.

FIG. 13.

Inscription to Anicius Ingenuus, the army medical officer. Discovered at *Borcovicus*.

Θεοῦς σωτ Ἡρσῖν
υπ ΕΡΜΕΝΕΣΙΝ
ΕΡΜΟΓΕΝΕΣ
ΙΑΤΡΟΣ ΒΩΜΟΝ
ΤΟΝΔ ΑΝΕΘΗΚΑ

FIG. 14.

Inscription on an altar erected to the gods by Hermogenes, the physician. Discovered at Chester.

Habrocomas. The first of these inscriptions shows that Anicius Ingenuus, the popular regimental medical officer of the first cohort of Tungrians, was only 25 years of age when he died. That is typical of many inscriptions, and Glover thinks that they indicate that the Romans were a short-lived race, perhaps as the result of excessive hot bathing. Fig. 15 shows two similar inscriptions discovered at Bath.

C. MVRRIVS C.F. ARNIENSIS	DIS MANIBVS
FORO IVLI MODESTVS MIL	M. VALERIVS. M.
LEG. II. AD. P.F. IVLI SECVND	POL. EATINVS. C. EQ.
ANN. XXV. STIPEND	MILES. LEG. AVG. AN.
H.S.E.	XXX. STIPEN. X.
	H.S.E.

FIG. 15.

Roman inscriptions discovered at Bath.

I shall conclude the account of bathing in Roman Britain with the reproduction of an inscription discovered at Bath. It celebrates the recovery of Aufidius Maximus of the sixth legion, and it was erected by his freedman Aufidius Eva:—

DEAE SVLIN
PRO SALVTE ET
INCOLVMITA
AVFID MAXIMI
LEG VI VIC.
AVFIDIVS EVA
LEB. V.S.L.M.

FIG. 16.

Inscription on an altar celebrating the recovery of Aufidius Maximus of the sixth legion.

THE BRITISH INTERVAL.

When the Romans left, the Britons were greatly harassed by the Picts and Scots, and, as they could not put up a strong enough resistance themselves, they asked the Angles and Saxons to help them. The latter, as is well known, saw the richness of the land and decided to remain and keep it. A hard struggle then ensued between the Britons and the strangers, so balneo-therapy fell into decay. The magnificent thermæ were deserted by bathers and they

became ruinous, partly as the result of natural agencies, and partly by the fighting which took place in them, for the Britons used them as fortresses. The state of ruin and desolation has been described in the following versions of a Saxon poem of the eighth century describing Bath :—

I.

“ Wondrous is its wall of stone, strange the ruin !
Broken are the burg steads ! Crumbled is the giants’ work ;
Fallen are the roof beams ; tottering are the towers ;

II.

Bright were the burg steads, the bath-houses many ;
High towered the pinnacles, of the host a mickle sound,
Many were the mead-halls, full of mirth of men,
Till all was overturned by fate the violent !

III.

There stood the courts of stone ; hotly surged the stream,
With a widening whirling (a wall enclosing all),
Within its bosom bright. There the baths were set,
Hot within their heart ; fit (for health) it was.”¹

Eventually the Saxons triumphed and settled down, and the *thermæ* were once more frequented, but the names of the places were changed. *Aquæ Sulis*, the Roman name for Bath, was, for example, altered to *Akemancester*.

THE SAXON PERIOD (A.D. 410-1066.)

Sir John Floyer writes as follows in his “*Pseuchrolusia*” :—

“ The Saxons, who succeeded the Romans, brought in the German custom of washing in rivers for the preserving of their healths, and that made them receive the Baptismal Immersion in rivers and fountains without any scruple ; and ’tis probable, that on these the first Christians imposed the name of their Saints, and religion taught the heathens to change the names of their springs, and dedicate them to the Christian Saints, which for their great cures were formerly attributed to the Daemons ” [13].

¹ Cp. J. Earle, *An Anglo Saxon Poem of a City in Ruins*, supposed to be Bath, Bath 1872 ; see *Academy*, July 12, 1884, for translation.

When the Saxons settled down, they made use of the Roman thermæ, their clergy invented legends for their mineral springs and wells, and their leeches engaged in practice.

The Saxon language had several words for baths, bathing, fomenting, vapour baths, bidet, springs, enemata, &c., and the following are a few of them taken from the glossary of the Leech Book :—

Badian = to bathe.

Bedian = to foment or warm.

Byden = a bucket with a perforated stool (bidet).

Spring = a gush of water, a lavement, sousing, washing.

Seanbæp = a vapour bath contrived by heating stones that would not fly and pouring on water.

A study of these Saxon medical books shows that baths containing herbs, medicated drinks, fomentations, clysters and vapour baths were employed in most diseases, and the leeches used these herbal remedies in preference to the best forms of Greek medicine and surgery.

MYSTIC WELLS.

From the earliest times wells which foretold calamity, or had a reputation for curing diseases, have been known in Britain, and Hope [18], Quiller Couch [22] and others have described more than 129 of the latter group. Some of these were known to the early Britons, and as time went on they were employed by the Romans and Saxons. It is difficult to assign a date for the beginning of a spring's reputation, but it is probable that many which were frequented till comparatively modern times were known to the Britons, Romans or Saxons.

If a spring ebbed and flowed, or exhibited any physical peculiarity, and a change was observed to be synchronous with some terrible event, the common people formed the superstition that the water could foretell calamity. Such a spring used to exist at North Tawton in Devonshire.

A well might obtain a reputation as the result of the prayers of some holy man. It is said that a Norman monk asked for a blessing on the well at Wye in Kent, and God conferred miraculous healing powers on the water.

The name of some Saint was conferred on many of the wells of England, even if the Saint had never visited the spring, and the waters obtained mystic powers as the result of his or her influence. It is believed, however, that many of the legends were invented by monks of neighbouring monasteries for their own purposes. Although the

Saint lived in the Saxon times the fables did not appear till long after the Norman Conquest, and accurate chroniclers who lived in the intermediate period did not record them. A well of this kind is Holywell, in Flintshire, where St. Winifred was murdered in the seventh century.

Wells which had the reputation for healing scrofula, leprosy, skin diseases, paralysis, sterility, rickets, &c., were not always presided over by some Saint, and they had actual curative powers. Some cures were produced by the psychic factor, in some cases the patients were fortunate, and in others the cure was due to a genuine effect of the water on the disease.

Mystic wells of different kinds have been described in many books and papers so I shall not enter into the matter any further, but I append a list of some useful works on this subject in the bibliography.

I have now laid before you the history of baths and bathing in Britain before the Norman Conquest. It is, however, only an outline, for each of the periods could form the subject for a special paper. I have appended a table showing the distribution of the balneotherapeutic relics which should prove of value.

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THE DISTRIBUTION OF BRITISH, ROMAN AND SAXON RELICS.

Locality	British remains	Roman remains	Saxon remains
<i>Cornwall—</i>			
Carn Brea Hill ...	Druidical relics	—	—
Madron Parish ...	Madron Well	—	St. Maderne's Well
Bossens St. Erith	—	Well, inscribed patera	—
<i>Devonshire—</i>			
Torr ...	Druidical relics	—	—
N. Tawton ...	—	—	Holy well
<i>Somerset—</i>			
Camalet ...	King Arthur's Well	—	—
Stanton Drew ...	Druidical relics	—	—
Harptre ...	Bladud's College	—	—
Bath ...	Waters used	Thermæ	Baths
Wilton ...	—	—	St. Grange Well
<i>Wiltshire—</i>			
Pitmead ...	—	Hypocaust	—
Rudge ...	—	Rudge cup	—
<i>Hampshire—</i>			
Silchester ...	—	Baths	—
<i>Berks—</i>			
Cumner ...	—	—	Well
Old Windsor ...	—	—	St. Peter's Well
<i>Sussex—</i>			
Eastbourne ...	—	Hypocaust	—
<i>Surrey—</i>			
Reigate ..	—	Tiles	—
<i>Kent—</i>			
Withersden ...	—	—	St. Eustace Well
Faversham ..	—	—	Well
Dover ...	—	Hypocaust	—
<i>Gloucestershire—</i>			
Woodchester ...	—	Villa and baths	—
Bourton ...	—	Bath	—
Cirencester ...	—	5 Hypocausts	—
Chedworth ...	—	Hypocaust	—
Lechlade ...	—	Hypocaust	—
Bibury ...	—	Baths	—
<i>Oxfordshire—</i>			
Stunfield ...	—	House and baths	—
Burcester ...	—	—	St. Edburg's Well
<i>Hertfordshire—</i>			
Ashwell ...	Used by Britons	—	Used by Saxons
Damfurlong ...	—	—	St. Faith's Well
Baldock ...	—	—	Well
<i>Middlesex—</i>			
London ...	—	Baths and box-tiles	—
<i>Essex—</i>			
Leyton ...	—	House and bath	—
Wulpitt ...	—	—	Our Lady's Spring
<i>Suffolk—</i>			
Ipswich ...	—	—	Holy well
<i>Norfolk—</i>			
Walpole ...	—	Aqueduct	—
<i>Huntingdon—</i>			
Holywell ...	—	—	Sacred spring
<i>Northamptonshire—</i>			
Peterborough ...	—	—	Medeswell
Wedon Pinkney ...	—	—	St. Loy's Well
Wellingborough ..	—	—	Redewell
<i>Leicestershire—</i>			
Leicester ...	—	Thermæ	St. Austin's Well

THE DISTRIBUTION OF BRITISH, ROMAN AND SAXON RELICS—continued.

Locality	British remains	Roman remains	Saxon remains
<i>Lincolnshire—</i>			
Spalding ...	—	Cisterns	—
Lincoln... ..	—	Thermae	Black Annis Well
Castor	—	Syfer spring	—
<i>Derbyshire—</i>			
Buxton	—	Roman walls	—
Middleton	—	Bath	—
Stanton Moor ...	Druidical relics	—	—
Cratcliff	"	—	—
Arbelow	"	—	—
Endlow... ..	"	—	—
<i>Shropshire—</i>			
Wroxeter	—	Thermae	—
Hasbury	—	—	St. Margaret's Well
Oswestry	—	—	St. Oswald's Well
<i>Cheshire—</i>			
Chester	—	Thermae; pipes	—
<i>Yorkshire—</i>			
Ilkley	—	Altar to Verbeia	—
Greta	—	Altar to Neinbrica	—
Bowes	—	Altar celebrating repair of a bath	—
Doncaster	—	—	St. Catherine's Well
Slack	—	Hypocaust and baths	—
Aldborough	—	Hypocaust	—
Whitby... ..	—	—	St. Hilda's Well
Hovingham	—	Hypocaust and baths	—
<i>Cumberland—</i>			
Papcastle	—	—	Font of St. Ambrose
Ellenboroughh ...	—	Bas-relief of woman in bath	—
Netherby	—	Hypocaust and baths	—
Scaleby	—	Hypocaust and baths	—
Chesters	—	Hypocaust and baths	—
Stanwix	—	Aqueduct	—
WALES			
Brecknock	—	Hypocaust and baths	—
Caerleon	—	Baths and temples	—
Newtown	—	—	Sacred spring
Dinivaer	—	—	Sacred spring
Carnarvon	—	Hypocaust	—
Braich-y-Dinas ...	Druidic temple	—	—
Conwy	—	Hypocaust	—
Llandegla	—	—	St. Tecla's Well
Holywell	—	—	St. Winifred's Well
Hope	—	Hypocaust	—
Diferth	—	—	St. Asaph's Well
Abergellen	—	—	Our Lady's Well
SCOTLAND			
Inveresk	—	Hypocaust	—
Cramond	—	Sudatory and bath	—
Middleesby	—	Hypocaust	—
Duntochar	—	Hypocaust and bath	—
Strathfillan	Holy pools	—	—

DISCUSSION.

Dr. PRESTON KING: Dr. Sonntag has been at very great pains to collect so much material. He has shown that the records of "Water Cures" carry us much further back in history than any of us have had any idea. During the Roman occupation the hot waters of Bath were probably used as much for luxurious bathing as for their medicinal properties. Dr. Sonntag has alluded to the mythical cure of Bladud's pigs, and in this connexion it is interesting to note that the Bath waters are still of very remarkable use in the cure of skin complaints.

Dr. PARKES WEBER: Is it definitely known that prolonged baths were employed at Bath in the Roman times for skin affections, as they are at Loècheles-Bains, in Switzerland? There the prolonged baths, after a time, generally give rise to a more or less striking cutaneous reaction (poussée). In Roman times skin diseases, of a parasitic nature, such as scabies, were probably treated by prolonged baths at thermal springs, and the *Acarus scabiei* may have been actually drowned, or cast off during the cutaneous reaction following the repeated maceration of the epidermis by the prolonged hot bathing.

Dr. BUCKLEY: I believe that the use of mineral waters dates back far beyond the Roman occupation of Britain, but was at that date probably limited to thermal springs. The sight of steam rising from a spring which was a feature of the Buxton springs equally with others of the thermal type could not fail to attract the notice of the natives even of the lowest type of civilization. That Buxton even so long ago presented some attraction is clearly shown by the number of Neolithic weapons and burial mounds found in the district, while evidences of Roman occupation are equally numerous including the remains of a wall which appears to have been part of a bath. The springs arise at the foot of a hill, the summit of which is crowned by a fort which stands at the junction of two Roman roads which can still be readily traced. A lead cistern of Roman work connected with the springs was unearthed in 1698. It is a matter of peculiar interest to the Section that the use of mineral waters medicinally is probably the only therapeutic method which has stood the test of time, practically unchanged, since the era of Hippocrates, and this must be regarded as convincing evidence of the value of such treatment if such evidence be required. At the present day, when the treatment of disease by physical, electrical and similar methods is receiving so much attention, it is worthy of note that those practitioners who have most experience of mineral waters and who at the same time have access to almost every variety of treatment tend more and more to the use of the waters to the exclusion of more modern methods because they find the results to be obtained are far in advance of those resulting from other therapeutic measures.

Dr. SONNTAG (in reply): There is no definite evidence that prolonged bathing for parasitic skin diseases was practised at Bath in Roman times. Perhaps the "Circular Bath" was employed for the purpose.

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